

REMARKS

Claims 2 to 5 and 8 to 13 have been canceled and claims 14 to 24 have been withdrawn from consideration. Claims 1, 6, and 7 still remain under consideration.

The invention as set forth in claim 1 and dependent claims 6 and 7 is a roll of prefabricated asphalt-based waterproof roofing membrane that consists essentially of: an asphalt saturated and coated reinforcing substrate; a preformed highly reflective thermoplastic elastomeric sheet layer; a polymer primer layer intermediate and bonded directly to a top surface of the top asphalt layer and a bottom surface of the highly reflective thermoplastic elastomeric sheet layer; and a release sheet. The asphalt saturated reinforcing substrate has a top asphalt layer overlaying and coextensive with a top major surface of the asphalt saturated reinforcing substrate and a bottom asphalt layer overlaying and coextensive with the bottom major surface of the asphalt saturated reinforcing substrate. The highly reflective thermoplastic elastomeric sheet layer consists essentially of a polyvinyl chloride material and a reflective pigment. The highly reflective thermoplastic elastomeric sheet layer has a top surface forming a top surface of the prefabricated asphalt-based waterproof roofing membrane that has an initial solar reflectance of at least 0.65 and a solar reflectance of at least 0.50 after three years. The polymer primer layer is intermediate and bonded directly to a top surface of the top asphalt layer and a bottom surface of the highly reflective thermoplastic elastomeric sheet layer, is impermeable to oils and other colored components of the top asphalt layer, and keeps the oils and other colored components of the top asphalt layer from exuding into the highly reflective thermoplastic elastomeric sheet layer and reducing the reflectance of the highly reflective thermoplastic elastomeric sheet layer. The release sheet is on the top major surface or the bottom major surface of the prefabricated asphalt-based waterproof roofing membrane; is separable from the prefabricated

asphalt-based waterproof roofing membrane; permits the prefabricated asphalt-based waterproof roofing membrane to be wound into the roll for packaging, storage, shipping, and handling without the bottom major surface of the asphalt saturated reinforcing substrate adhering to or discoloring the top surface of the highly reflective thermoplastic elastomeric sheet layer; and permits the prefabricated asphalt-based roofing membrane to be unwound from the roll for installation.

Claims 1, 6, and 7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Urbanek (US Patent No. 5,434,009) in view of Zanchetta (US Patent No. 5,964,946) and Kyminas (US Patent No. 4,749,731).

Urbanek discloses an asphaltic roofing laminate which is fabricated on site and which may be reinforced by partially embedding a flexible mesh in a base asphaltic layer of the laminate (col. 4, lines 33-36). A barrier layer and a shield layer may be applied to one major surface of the base asphaltic layer (col. 4, lines 37 and 38) at the job site (col. 2, lines 36 to 39). The barrier layer should have barrier characteristics to mobile (oily) phases in the asphalt (col. 2, lines 47 and 48). The shield layer should be ultraviolet light blocking (col.4, lines 52 to 55) and can contain titanium oxide.

However, unlike the prefabricated asphalt-based waterproof roofing membrane of the subject invention as set forth in claim 1, Urbanek discloses an asphaltic roofing laminate that is formed at the job site. Urbanek does not disclose a prefabricated asphalt-based waterproof roofing membrane roll good wherein: the prefabricated asphalt-based membrane roll good consists essentially of an asphalt saturated reinforcing substrate, a preformed highly reflective thermoplastic elastomeric sheet layer, a polymer primer layer intermediate and bonded directly to a top surface of the substrate and a bottom surface of the highly reflective sheet layer that is impermeable to oils, and a release sheet that is separable from the membrane and permits the prefabricated asphalt-based waterproof roofing membrane to be wound into the roll for packaging,

storage, shipping, and handling without the bottom major surface of the asphalt saturated reinforcing substrate adhering to or discoloring the top surface of the highly reflective thermoplastic elastomeric sheet layer. Urbanek does not disclose or suggest a prefabricated asphalt-based waterproof roofing membrane roll good, such as that set forth in claim 1, wherein the prefabricated roll good has an initial solar reflectance of at least 0.65 and a solar reflectance of at least 0.50 after three years. Urbanek forms the Urbanek laminate in place at the job site and does not disclose or suggest a prefabricated asphalt-based waterproof roofing membrane roll good, such as that set forth in claim 1 which eliminates the need to form the laminate at the job site, wherein a release sheet that is separable from the membrane permits the prefabricated asphalt-based waterproof roofing membrane to be wound into the roll for packaging, storage, shipping, and handling without the bottom major surface of the asphalt saturated reinforcing substrate adhering to or discoloring the top surface of the highly reflective thermoplastic elastomeric sheet layer. Thus, Urbanek fails to disclose or suggest the prefabricated asphalt-based waterproof roofing membrane as set forth in claims 1, 6, and 7.

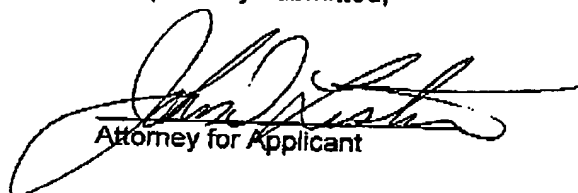
Zanchetta discloses a bitumen-based waterproofing membrane sheet wherein the sheet is coated with granular material to protect the membrane from ultraviolet rays. However, before applying the granular material to the sheet, exposed bitumen on a lateral edge section of the membrane sheet is first covered with a piece of protective tape which prevents any granular material from being deposited on the exposed bitumen beneath the tape and forms an improved edge sealing surface on the lateral edge section. During installation, the tape is removed to expose the bitumen for bonding the edge section to another waterproofing membrane sheet.

While Zanchetta discloses a bitumen-based waterproofing membrane that utilizes the application of a tape before the application of granules to form an improved

edge sealing surface on the membrane, Zanchetta does not disclose or suggest the use of a release sheet, in combination with a prefabricated asphalt-based waterproof roofing membrane with a highly reflective top surface, to permit the prefabricated asphalt-based waterproof roofing membrane to be wound into a roll for packaging, storage, shipping, and handling without the bottom major surface of an asphalt saturated reinforcing substrate of the membrane adhering to or discoloring the top surface of the highly reflective thermoplastic elastomeric sheet layer of the membrane. Thus, even when considered together, Urbanek and Zanchetta fail to disclose or suggest the prefabricated asphalt-based waterproof roofing membrane as set forth in claims 1, 6, and 7.

Kyminas discloses a polyvinyl chloride polymer coating with reflective pigments and the application of the coating in two coats. However, Kyminas fails to otherwise supplement the disclosures of Urbanek and Zanchetta; claims 1, 6, and 7 are patentable over Urbanek, Zanchetta, and Kyminas for the reasons discussed above in connection with Urbanek and Zanchetta; the withdrawal of the rejection of claims 1, 6, and 7 as unpatentable over Urbanek, Zanchetta, and Kyminas is solicited; and the allowance of claims 1, 6, and 7 is requested.

Respectfully submitted,



Attorney for Applicant

John D. Lister
Registration No. 23,004
(480) 641-7459